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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/561,026

12/16/2005

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M-16290 US

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EXAMINER

TRAN, TRANG Q

ART UNIT

PAPER NUMBER

2809

MAIL DATE

DELIVERY MODE

09/10/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,026

Applicant(s)

TISHIN ET AL.

Examiner

Trang Q. Tran

Art Unit

2809

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

Art Unit: 2809

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Merrill (US PGPub 2002/0058353).

Fig. 2 and 3 of Merrill teaches the vertical color filter detector with separation of color components of light incident to its surface, formed in a silicon substrate (60) of the conductivity of the first type (p-type) with ohmic contact (it is inherent to have contact to connect between the input layers and the outputs) and comprising:

a first region of the conductivity of the second type (n-type), located in the near surface substrate layer, which is divided into the first (74), second (70) and third portions (64) by the regions of silicon dioxide (¶ 43) and equipped with the first, second and third ohmic contacts, and which form the first, second and third p-n junctions with the substrate;

a first heavily-doped region (72) of the same conductivity type (p-type) as the substrate (60), located under said first region (74) of the conductivity of the second type,

Art Unit: 2809

which forms a first potential barrier for charge carriers generated in the substrate region under the first barrier (¶ 43);

a second heavily-doped region (66) of the same conductivity type as the substrate, located under said first heavily-doped region (72), which forms a second potential barrier for charge carriers generated in the substrate region under the second barrier (¶ 43);

a third heavily-doped region (60) of the same conductivity type as the substrate, located under said second heavily-doped region (66), which forms a third potential barrier for charge carriers generated in the substrate region under the third barrier (¶ 43);

said first (72), second (66) and third (60) heavily-doped regions have relative positioning and configuration, which provide formation of the first (76) and the second (78 and 80) channels for diffusion of the secondary carriers generated in the substrate regions located under the first and the second potential barriers to the first and the third p-n junctions respectively; in this case, the length of the channels does not exceed the diffusion length of the secondary charge carriers;

- said first, second and third ohmic contacts are connected to the first, second and third outputs (¶ 31) of the photosensitive cell, which are connected via the readout circuits (¶ 13) to the positive pole of the voltage source (Fig. 2A), whose negative pole is connected to the substrate (Fig. 2A) via an ohmic contact.

Art Unit: 2809

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trang Q. Tran whose telephone number is 571-270-3259. The examiner can normally be reached on Monday-Friday, 7:30am-5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Pendleton can be reached on 571-272-7527. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TT


BRIAN TYRONE PENDLETON
SUPERVISORY PATENT EXAMINER